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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,036	01/09/2007	Pierre Girodet	4195-034	5333
24112	7590	03/04/2010		
COATS & BENNETT, PLLC 1400 Crescent Green, Suite 300 Cary, NC 27518			EXAMINER SMYTH, ANDREW P	
			ART UNIT 2881	PAPER NUMBER
			MAIL DATE 03/04/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,036	Applicant(s) GIRODET ET AL.	
	Examiner ANDREW SMYTH	Art Unit 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>07/03/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Previous Office Action's Summary

1. Claims 13-33 were rejected in Non-Final Rejection of 09/08/2009.

Response to Amendment of 11/06/2009

1. Claims 13-14, 18, 20-24, and 30 were amended.
2. Claims 15, 26, and 32 were canceled; claims 1-12 were previously canceled.

Response to Arguments

1. Applicant's arguments with respect to claims 13-14, 16-25, 27-31, and 33 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 13-14, 20-21, 23-24, and 30-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Trautenberg et al. (US 6,646,269).

Regarding claims 13, 23, and 30, Trautenberg et al. teaches an ultraviolet water disinfection system/ method of supporting and driving one or more scraping rings

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around one or more sheaths of ultraviolet lights that form a part of an ultraviolet water disinfection system (abstract note cleaning apparatus for a radiation source assembly in a fluid treatment system) comprising:

- a plurality of ultraviolet lights (column 1, lines 20-33 note array of UV lamps)(120) with each ultraviolet light having a sheath (107 note made of quartz) that is transparent to ultraviolet radiation (quartz is UV transparent);
- a scraping ring (figure 17, 156, 157 note a pair of drive cones 156,157 serve to provide an interface between split plate 145a of carriage 145 and quartz sleeve 107; drive cones 156,157 are made of Teflon) surrounding each sheath for moving back and forth along the sheath and cleaning the sheath;
- a support structure (145a, 145b) for supporting a plurality of the scraping rings;
- a drive (column 10, lines 27 to column 11, line 20 note drive member, pulleys, cables) for driving the support structure and each of the scraping rings along the sheath such that the scraping rings clean the sheath;
- the support structure including a series of bearing rings (figure 17, 145a and 145b form ring structure at the outer peripheral groove of rings 156 and 157) ; and
- wherein each scraping ring includes an outer peripheral groove (figure 17, 145a and 145b form ring structure at the outer peripheral groove of rings 156 and 157);
- wherein each bearing ring is received within the outer peripheral groove of a respective scraping ring (see figure 17).

Regarding claims 14, 24, and 31, Trautenberg et al. teaches the each scraping ring (figure 17, 157, 156) includes

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- a slot extending therethrough separating a first end of the scraping ring from a second end of the scraping ring; the slots allow the geometry of the scraping rings to be varied (the slot or groove in the scraping ring is where the bearing ring of the support structure 145a and 145b hold the scraping ring 156, 157; the rings are changeable and are held by their slot/groove by the bearing ring of support structure 145a and 145b) see also (column 10, lines 27 to column 11, line 20 note the design of split plates 145a/145b of carriage 145 as shown in FIG. 17 enhance the ability of the radiation source assembly and the cleaning sleeve to move in the direction of arrows B).

Regarding claims 20-21, Trautenberg et al. teaches that each peripheral groove includes

- a width /depth extending between first and second sides of the scraping ring (figure 17, see 156, 157 groove where held by the bearing rings formed from support structure 145a/145b) and is dimensioned such that there is a clearance between the bearing ring and the first and second sides of the groove (figure 17, arrow B denotes the clearance which enables the movement of 156/157 inside of the bearing rings formed from support structure 145a/145b).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 16-22, 25, 27-29, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boehme (US 4,922,114) in light of Trautenberg et al. (US 6,646,269).

Regarding claims 16 and 27 Trautenberg et al. discloses the elements of independent claim 13 that dependent claims 16 and 27 depend upon, see previous.

But Trautenberg et al. fails to teach that each scraping ring/wiper cooperates with an elastomember which tends to clamp the ring/wiper onto the sheath/sleeve and that the bearing ring supports the wiping ring.

Boehme, however, teaches that each scraping ring/wiper (figure 4a; 36) cooperates with an elastomember (48) which tends to clamp the ring/wiper onto the sheath/sleeve and that the bearing ring supports the wiping ring (figure 4a, 48, 56, 54) (column 3, lines 6-28).

Boehme modifies Trautenberg et al. by teaching that each scraping ring/wiper cooperates with an elastomember which clamps the ring/wiper onto the sheath/sleeve to improve the contact of the scraping ring/wiper with the sleeve/sheath to better remove particulates from it and that the bearing ring supports the wiping ring for structural support.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the elements of an ultraviolet water disinfection system/ method of supporting and driving one or more scraping rings around one or more sheaths of ultraviolet lights that form a part of an ultraviolet water disinfection system, as disclosed by Trautenberg et al., with the structural configuration, as taught

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by Trautenberg et al., to enable structural support and to improve the contact of the scraping ring/wiper with the sleeve/sheath for the removal of particulates from the exterior of the sheath of the UV bulb arrangement to maximize transmission of the sterilizing UV light.

Regarding claims 17 and 29 Trautenberg et al. discloses the elements of independent claim 13 that dependent claims 17 and 29 depend upon, see previous.

But Trautenberg et al. fails to teach that the elastomember includes an annular spring.

Boehme, however, teaches that the elastomember includes an annular spring (figure 4a, 48 is an annular spring).

Boehme modifies Trautenberg et al. by teaching that the elastomember includes an annular spring for tensioning of the elastomers and the scraping ring/wiper.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the elements of an ultraviolet water disinfection system/ method of supporting and driving one or more scraping rings around one or more sheaths of ultraviolet lights that form a part of an ultraviolet water disinfection system, as disclosed by Trautenberg et al., with the elastomember including an annular spring, as taught by Trautenberg et al., to create the proper tensioning of the elastomember and the scraping ring/wiper.

Regarding claims 19, 28, and 33 Traubenberg et al. discloses the elements of independent claims 13, 23, and 30 that dependent claims 19, 28, and 33 depend upon, respectively, see previous.

But Traubenberg et al. fails to teach the elastomember forms a part of the scraping ring/wiper.

Boehme, however, teaches that the elastomember forms a part of the scraping ring/wiper (figure 4a, 48) (column 3, lines 6-28).

Boehme modifies Traubenberg et al. by teaching that the elastomember forms a part of the scraping ring/wiper as a component of the assembly for structural support/enabement.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the elements of an ultraviolet water disinfection system/ method of supporting and driving one or more scraping rings around one or more sheaths of ultraviolet lights that form a part of an ultraviolet water disinfection system, as disclosed by Traubenberg et al., with the elastomember forms a part of the scraping ring/wiper, as taught by Traubenberg et al., to provide for the structural support/enabement.

Regarding claims 22 and 25 Traubenberg et al. discloses the elements of independent claims 13 and 23 that dependent claims 22 and 25 depend upon respectively, see previous.

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But Trautenberg et al. fails to teach that the support structure includes a pair of arms from which a plurality of the bearing rings extend.

Boehme, however, teaches that the support structure (figure 3, 34, 42) includes a pair of arms from which a plurality of the bearing rings extend (figures 5, 6, 7 as various wiper arrangements supported by the bearing rings/arms).

Boehme modifies Trautenberg et al. by teaching that the support structure includes a pair of arms from which a plurality of the bearing rings extend for structural support.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the elements of an ultraviolet water disinfection system/ method of supporting and driving one or more scraping rings around one or more sheaths of ultraviolet lights that form a part of an ultraviolet water disinfection system, as disclosed by Trautenberg et al., with the structural configuration, as taught by Trautenberg et al., to utilize as a supporting structure of the device for the structural configuration/enabement.

Regarding claims 18 and 20-21 Trautenberg et al. discloses the elements of independent claim 13 that dependent claims 18 and 20-21 depend upon, see previous.

But Trautenberg et al. fails to teach that the support structure/ bearing ring is dimensioned to accommodate the wiper ring structure and its scrapping wiping member that cooperates with an elastomember that is at least partially housed in the peripheral groove of the scraping ring.

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Boehme, however, teaches that the support structure/ bearing ring is dimensioned to accommodate the wiper ring structure and its scraping wiping member that cooperates with an elastomember (48) that is at least partially housed in the peripheral groove of the scraping ring (48 is housed in the space between 54 and 46)(figure 3a, 34, 44, 46, 48, 48a, 54)(see figure 4a, for assembled structure).

Boehme modifies Trautenberg et al. by teaching that the support structure/ bearing ring is dimensioned to accommodate the wiper ring structure and its scraping wiping member that cooperates with an elastomember that is at least partially housed in the peripheral groove of the scraping ring for structural support.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the elements of an ultraviolet water disinfection system/ method of supporting and driving one or more scraping rings around one or more sheaths of ultraviolet lights that form a part of an ultraviolet water disinfection system, as disclosed by Trautenberg et al., with the structural configuration, as taught by Trautenberg et al., to utilize as a supporting structure.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pertinent prior art is closely related art that individually or in combination could be considered grounds for rejection. See references cited for a listing of the pertinent prior art found and the prior art found.

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2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Smyth whose telephone number is 571-270-1746. The examiner can normally be reached on 7:30AM - 5:00PM; Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. S./
Examiner, Art Unit 2881

/ROBERT KIM/
Supervisory Patent Examiner, Art Unit 2881